



Imaging

NON-ADHERENCE TO THE APPROPRIATE USE CRITERIA IMPAIRS THE PROGNOSTIC VALUE OF SPECT MYOCARDIAL PERFUSION IMAGING

Poster Contributions

Poster Sessions, Expo North

Sunday, March 10, 2013, 9:45 a.m.-10:30 a.m.

Session Title: SPECT: Appropriate Use Criteria and Role in Specific Populations

Abstract Category: 21. Imaging: Nuclear

Presentation Number: 1229-357

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Background: The impact of adherence to the Appropriate Use Criteria (AUC) on the prognostic value of SPECT-myocardial perfusion imaging (MPI) is unknown.

Methods: We conducted a 2 year follow up, prospective cohort study of consecutive patients who underwent a Tc99m sestamibi MPI. Subjects were stratified based on adherence to 2009 AUC. Events of death, MI and coronary revascularizations were recorded. Binary logistic regression was used to determine incremental prognostic value (χ^2) of AUC.

Results: 1511 subjects [44% women, age 59 ± 13 years] were followed for 27 ± 10 months post-MPI of which 55% were appropriate or uncertain and 45% were inappropriate. In the entire cohort, patients with abnormal MPI [114 (13%)] experienced a multi-fold increase in the rate of revascularization, death, and the composite of cardiac death or MI (Fig A). When in adherence with AUC, abnormal MPI was associated with multi-fold increase in the rate of revascularization, and the composite of cardiac death or MI (Fig B). When non-adherent with AUC, abnormal MPI was associated with high revascularization rate but failed to predict hard-events (Fig C). Adherence to the AUC had an incremental prognostic value beyond myocardial perfusion and ejection fraction (EF) (Fig D).

Conclusions: Inappropriate MPI referral impairs the prognostic value of test. This investigation represents the first prognostic validation of the AUC and, thus, solidifying their role in clinical practice, policy making, and reimbursement rules.

